Laparoscopic drainage of a recurrent psoas abscess

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BACKGROUND: Many Authors suggest that psoas abscesses should initially undergo an antibiotic therapy, with or without percutaneous drainage. In their opinion, surgical drainage should be done in case of failure or complicated recurrences. Herein we report a laparoscopic drainage of a recurrent and multilocular psoas abscess.

METHODS: A 43-year-old woman presented to our department with a 4-week history of fever, anorexia, difficulty in walking, and pain in her right flank, lower back and hip. She had a 20-year history of recurrent lower back pain and fever treated with cyclic antibiotic therapy. Abdominal CT scan showed a complex multilocular right psoas abscess and a 17mm hypodense area in the sixth liver segment. A drainage of the abscess through a laparoscopic access with intra-operative laparoscopic ultrasound of the liver was decided.

RESULTS: The patient was discharged on the 3rd postoperative day. Her white blood cell count was normal and she was symptom free. At 1-, 6-, 12- and 24-months-follow-up, neither fever nor lower back pain were reported.

CONCLUSIONS: According to our experience, laparoscopic drainage of iliopsoas abscess is safe and effective. However, further studies comparing laparoscopic drainage with open drainage and percutaneous drainage are required in order to define the specific indications of laparoscopic drainage.

KEY WORDS: Laparoscopic drainage, Multilocular abscess

Introduction

Over the last years iliopsoas abscesses have frequently been reported, probably owing to the widespread use of Computed Tomography (CT) scans in the investigation of lower back pain. The incidence of psoas abscess is not well known (it was 12 cases per 100,000 per year in 1992) and 99% respectively and its causes have also changed in the last decades.

In Europe 17% of iliopsoas abscesses are primary, whereas in North America and Africa the percentages are 61% and 99% respectively. Conditions including Crohn's disease, diverticulitis, urinary tract infections and endocarditis are most often associated with secondary iliopsoas abscesses. External impacts on the lower back region and falling down have been reported to be associated with abscess formation in the spino-pelvic region.

Here we present a case of a patient who developed a post-traumatic iliopsoas abscess.
Case report

A 43-year-old woman presented to our department with a 4-week history of fever, anorexia, difficulty in walking, and pain in her right flank, lower back and hip. She had a 20-year history of recurrent lower back pain and fever treated with cyclic antibiotic therapy. Treatment with ceftriaxone 1 x 2 g IV began two weeks prior to presentation: fever reduction was achieved but pain persisted.

Her past medical history included chronic cystitis and epilepsy. Furthermore, she reported she had fallen off a horse 20 years before. Few weeks later she had experienced her first episode of lower back pain and fever. On examination, there was a moderate tenderness over the right sacroiliac joint and pain on straight right leg raising at 30 degrees: the level of pain was 8/10 on the visual analogue scale (VAS).

On admission, the white blood cell count was 13,620/μL, AST/ALT/GT were 9/9/18 IU/L, C-reactive protein was 250mg/L. Chest and abdominal X-ray were normal. Abdominal CT scan showed a complex multiloculated right psoas abscess with multiple calcified spots: abscess diameters were 6cm, 6cm and 20cm. Additionally, CT scan showed a 17mm hypodense area in the sixth segment of the liver needing further investigation (Fig. 1).

Considering the long history of recurrent infection, the indication to investigate the hepatic lesion together with the multilocular nature of the abscess, a drainage through a laparoscopic access was decided (Fig. 2). The iliopsoas fascia was widely opened along the muscle fibers which were spread apart. The abscess wall was opened and revealed two larger pockets; the amount of pus drained was 300 and 250 ml respectively (Fig. 3). The muscular lodge was washed abundantly and a large bore suction drain was inserted.

The intraoperative laparoscopic ultrasound of the liver detected a slightly hypoechoic inflammatory area in the sixth segment and excluded the presence of resectable lesions. The culture of the pus identified Staphylococcus aureus: treatment with cefazolin-gentamicin, whose sensitivity checked, was continued for a week.

The patient was discharged on the 3rd postoperative day. Her white blood cell count was normal and she was symptom free. At 1-, 6-, 12- and 24-months-follow-up, neither fever nor lower back pain were reported.

Discussion

Psoas abscess has traditionally been treated with surgical drainage via an extraperitoneal open approach. The development of highly effective antibiotic therapy together with the increased use of CT scan and US for diagnostic and therapeutic procedures, such as percutaneous drainage (PCD), have radically changed the management and treatment of iliopsoas abscess.

Many Authors suggest that they should initially undergo an antibiotic therapy, with or without PCD that is a simple and safe procedure with a low morbility and an overall success rate of 60%-90%. In their opinion, surgical drainage should be done in case of failure or complicated recurrences. However, the literature has been inconsistent as to whether laparoscopic or open surgical drainage is more safe, effective and affordable.

In our experience, laparoscopic drainage of iliopsoas abscess proved to be a safe procedure allowing an opti-
mal control of iliac vessels and ureter that prevents accidental injuries. Furthermore, it allows a better muscle exposition, providing a complete drainage and washing out of multilocular abscesses, accurate examination of contiguous anatomical structures, lysis of visceral adhesions and excellent cosmetic outcomes.

Conclusions

According to our experience, laparoscopic drainage of iliopsoas abscess is safe and effective. However, no other studies have been found which report this procedure. Therefore further studies comparing laparoscopic drainage with open drainage and PCD are required in order to define the specific indications of laparoscopic drainage.

Riassunto

Negli ultimi anni, gli ascessi del muscolo ileopsoas sono stati riportati in letteratura con crescente frequenza, probabilmente a causa del largo impiego della TC nella diagnosi differenziale delle algie lombari. Qui presentiamo il caso di una paziente che ha sviluppato un ascesso dell’ileo- psoas post-traumatico.

Una donna di 43 anni riferiva febbre da 4 settimane, anoressia, dolore al fianco destro e alla regione lombare e difficoltà alla deambulazione. Tale sintomatologia, insorta per la prima volta 20 anni prima in seguito ad una caduta da cavallo, si ripresentava ciclicamente. Per il controllo della febbre e del dolore, la paziente assumeva una terapia antibiotica empirica. Al momento del ricovero gli esami ematochimici mostravano una moderata leucocitosi. La TC dell’addome evidenziava un grosso ascesso multiloculato dello psoas destro ed una lesione ipodensa del sesto segmento epatico. Considerando la lunga storia di infezioni ricorrenti e l’indicazione ad investigare ulteriormente la lesione epatica, si optava per il drenaggio laparoscopico della lesione: aperta completamente la parete dell’ascesso, venivano drenati 550ml di liquido purulento la cui coltura evidenziava la presenza di Stafilococco aureo. Una ecografia del fegato intraoperatoria con sonda laparoscopica escludeva la presenza di una lesione resecabile del sesto segmento epatico e ne confermava la natura infiammatoria. La paziente veniva dimessa in terza giornata operatoria con terapia antibiotica mirata sull’antibiogramma. Nè febbre, nè dolore sono stati più riferiti ai successivi controlli a 1, 6, 12 e 24 mesi dall’intervento.

Molti Autori ritengono che gli ascessi dell’ileo- psoas pos- sano essere controllati con terapia antibiotica ed eventualmente attraverso il drenaggio percutaneo, riservando il drenaggio chirurgico ai casi complessi o recidivanti. Tuttavia la letteratura non chiarisce se sia da preferire il drenaggio chirurgico con accesso open o laparoscopico. Nella nostra esperienza, il drenaggio laparoscopico è
sicuro e consente un drenaggio completo anche degli ascessi multiloculati; inoltre consente la visualizzazione delle strutture anatomiche contigue che potrebbero essere coinvolte dal processo infettivo. Infine l’accesso laparoscopico permette una precoce dimissione e minimi esiti cicatriziali.

References